

WHAT IS CLAIMED IS:

1. A method for transferring an article to be processed, which is carried by a carrier device, to a holder provided in a processing chamber defined by a processing vessel and adapted to hold the article at a specified processing position, comprising the steps of:

receiving the article carried by the carrier device at an intermediate position near the holder by a temporarily holding member separate from the carrier device and temporarily holding the article;

retracting the carrier device from the intermediate position while leaving the article held by the holder;

relatively moving the temporarily holding member and the holder such that the article temporarily held by the temporarily holding member is transferred to the processing position; and

retracting the temporarily holding member to a position in an outside of the processing vessel after the article is transferred to the processing position.

2. A transferring apparatus for transferring an article to be processed, which is carried by a carrier device, to a holder provided in a processing chamber defined by a processing vessel and adapted to hold the article at a specified processing position, comprising:

a temporarily holding member switchable between a

temporarily holding position of receiving the article carried by the carrier device at an intermediate position near the holder from the carrier device and temporarily holding the article and a retracted position of resting in an outside of the processing vessel;

a position switcher for switching the temporarily holding member between the temporarily holding position and the retracted position; and

a carrier for relatively moving the temporarily holding member and the holder such that the article temporarily held by the temporarily holding member at the intermediate position is transferred to the processing position.

3. A transferring apparatus according to claim 2, wherein the temporarily holding member is so mounted on the processing vessel as to be movable relative to the holder.

4. A transferring apparatus according to claim 1, wherein the temporarily holding member is so mounted on the processing vessel as to be movable relative to the holder and switchingly movable between the temporarily holding position and the retracted position.

5. A transferring apparatus according to claim 1, wherein the temporarily holding member includes a rotatable

shaft rotatably mounted on the processing vessel about its own longitudinal direction and a temporarily-holding-member main body fixed to an end of the rotatable shaft in such a posture as to project outward from the rotatable shaft, and the position switcher switches the position of the temporarily holding member to the temporarily holding position where the temporarily-holding-member main body temporarily holds the article and to the retracted position retracted from the temporarily holding position by rotating the rotatable shaft.

6. A transferring apparatus according to claim 1, wherein the temporarily holding member includes an article holding portion for supporting the article from below at the temporarily holding position and is movable toward the temporarily holding position in a horizontal direction or an obliquely upward direction.

7. A transferring apparatus according to claim 6, wherein the temporarily holding member is locally formed with a portion having a smaller thickness, and the article supporting portion is defined within this thinned portion.

8. A transferring apparatus according to claim 7, wherein the temporarily holding member includes a stepped portion having an upper surface lower than that of the other

part of the temporarily holding member and shaped in conformity with the outer shape of the article, and the stepped portion serves as the article supporting portion.

9. A transferring apparatus according to claim 1, wherein a plurality of temporarily holding members are located at positions arranged along an outer periphery of the article, and hold an outer peripheral portion of the article at the temporarily holding positions thereof, and are retracted to the retracted positions located more outward than the temporarily holding positions.

10. A processing apparatus, comprising:

a processing vessel formed with a processing chamber inside,

a holder provided in the processing chamber and adapted to hold the article at a specified processing position, and

a transferring apparatus for transferring the article carried by a carrier device to the processing position,

wherein the transferring apparatus includes:

a temporarily holding member switchable between a temporarily holding position of receiving the article carried by the carrier device at an intermediate position near the holder from the carrier device and temporarily holding the article and a retracted position of resting in an outside of the processing

vessel;

a position switcher for switching the temporarily holding member between the temporarily holding position and the retracted position; and

a carrier for relatively moving the temporarily holding member and the holder such that the article temporarily held by the temporarily holding member at the intermediate position is transferred to the processing position.

11. A processing apparatus according to claim 10, wherein the temporarily holding member is so mounted on the processing vessel as to be movable relative to the holder.

12. A processing apparatus according to claim 10, wherein the temporarily holding member is so mounted on the processing vessel as to be movable relative to the holder and switchingly movable between the temporarily holding position and the retracted position.

13. A processing apparatus according to claim 10, wherein:

the processing vessel includes a first vessel member having the holder and a second vessel member having such a shape as to cover the holder of the first vessel member,

the two vessel members can be opened and closed between a

united position where they are united with each other so that the second vessel member covers the holder and defines the processing chamber together with the first vessel member and separated positions where the two vessel members are separated to expose the holder to the outside, and

the transferring apparatus transfers the article from the intermediate position to the holder with the two vessel members located at the separated positions.

14. A processing apparatus according to claim 13, wherein opening and closing directions of the two vessel members coincide with directions in which the article temporarily held by the holder is carried between the intermediate position and the retracted position, and the article is carried between the intermediate position and the retracted position as the two vessel members are opened and closed.

15. A processing apparatus according to claim 14, wherein the temporarily holding member is so mounted on the second vessel member as to be movable together with the second vessel member, temporarily holds the article at the intermediate positions with the two vessel members located at the separated positions, and transfers the article from the intermediate position to the processing position as the two vessel members are moved toward the united position in this temporarily holding

state.

16. A processing apparatus according to claim 14, wherein:

the second vessel member is arranged above the first vessel member,

the two vessel members are united and separated by being vertically moved relative to each other,

the intermediate position is set right above the holder on the first vessel member, and

the article is transferred between the intermediate position and the processing position by upward and downward movements of the temporarily holding member relative to the holder.

17. A processing apparatus according to claim 16, wherein the temporarily holding member includes an article supporting portion for supporting the article from below at the intermediate position.

18. A processing apparatus according to claim 17, wherein the transferring apparatus includes an article supporting portion for supporting the article from below during the carriage of the article and the thickness of the article supporting portion of the temporarily holding member is smaller

than that of the article supporting portion of the carrier device.

19. A processing apparatus according to claim 17, wherein the holder includes a supporting projection projecting upward from a main body of the holder to locally support a specific part of the article from below, and a projecting distance of the supporting projection is set such that a clearance larger than the thickness of the article supporting portion is defined between the bottom surface of the other part of the article and the main body of the holder with the bottom surface of the article locally held in contact with the supporting projection.

20. A processing apparatus according to claim 13, wherein a plurality of temporarily holding members are located at positions arranged along an outer periphery of the article, and hold an outer peripheral portion of the article at the temporarily holding positions thereof and are retracted to the retracted positions located more outward than the temporarily holding positions and located outside the vessel members when the two vessel members are united.